

BIOLOGICAL RESOURCES

Testimony of Susan Sanders

SUMMARY OF CONCLUSIONS

The Orange Grove Project (OGP) would be located in an unincorporated region of northern San Diego County. The project area encompasses abandoned orchards, dairies and other highly disturbed areas, but also includes native plant communities such as coastal sage scrub and riparian forest along the San Luis Rey River. Construction activities within or near these native habitat types have potential to directly or indirectly impact eleven species of special status plants and animals, including some listed as threatened or endangered under state and federal endangered species acts. Construction of the project would also result in temporary and permanent losses of 9.3 acres of coastal sage scrub and 3.4 acres of non-native grassland, which contributes to the significant cumulative loss of these habitat types in the northern San Diego County region.

To compensate for these losses and to achieve consistency with the draft North County Multiple Species Conservation Program, the applicant must implement avoidance, minimization, and compensation measures described in staff's conditions of certification. The Conditions of Certification include the recommended terms from the California Department of Fish and Game (CDFG) for a Streambed Alteration Agreement and a Habitat Loss Permit from the County of San Diego Department of Public Works. The latter permit incorporates guidance from the CDFG and the U.S. Fish and Wildlife Service for avoiding take¹ of state and federal listed species. With implementation of staff's conditions of certification, construction and operation of the project would comply with all federal, state, and local laws, ordinances, regulations, and standards relating to biological resources. Staff recommends adoption of the proposed Biological Resources Conditions of Certification to mitigate potential impacts to sensitive biological resources to less than significant levels.

INTRODUCTION

This section provides the California Energy Commission (Energy Commission) staff's Staff Assessment of potential impacts to biological resources from the construction and operation of the OGP, a 96-megawatt (MW) electric generation peaking facility. This analysis discusses the biological resources of the project site, linear and off-site facilities, and addresses potential impacts of the OGP to state and federally listed species and critical biological resources. This assessment describes the need for mitigation, the adequacy of mitigation proposed by the applicant, and specifies additional mitigation measures to reduce identified impacts to less than significant levels. It also determines the compliance of the applicant, J-Power USA Development Co., LTD (J-Power), with applicable laws, ordinances, regulations, and standards (LORS) and recommends conditions of certification.

¹ "Take" is defined by the California Department of Fish and Game (Fish and Game Code §86) as: "To hunt, pursue, catch, capture or kill, or attempt to hunt, pursue, catch, capture, or kill."

This analysis is based, in part, upon information provided in the OGP Application for Certification (OGE 2008a), responses to staff data requests (TRC 2008f); staff workshops (OGE 2008g) and other supplemental information provided by the applicant (OGE 2008c); site visits by Energy Commission staff on September 24 and November 29, 2007; and communications with representatives from the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and the San Diego County Public Works Department and Department of Land Use and Planning.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS (LORS)

Biological Resources Table 1
Laws, Ordinances, Regulations, and Standards (LORS)

FEDERAL	
Clean Water Act (CWA) of 1977	Title 33, United States Code, Sections 1251-1376, and Code of Federal Regulations, Part 30, Section 330.5(a)(26), prohibit the discharge of dredged or fill material into the waters of the United States without a permit. The administering agency is the U.S. Army Corps of Engineers (USACE).
Endangered Species Act (ESA) of 1973	Title 16, United States Code, Section 1531 et seq., and Title 50, Code of Federal Regulations, Part 17.1 et seq., designate and provide for the protection of threatened and endangered plant and animal species and their critical habitat. The administering agency is the U.S. Fish and Wildlife Service (USFWS).
Migratory Bird Treaty Act	Title 16, United States Code, Sections 703 through 712, prohibit the taking of migratory birds, including nests with viable eggs. The administering agency is the USFWS.
Fish and Game Coordination Act	Title 16, United States Code, section 661 et seq. requires federal agencies to coordinate federal actions with the U.S. Fish and Wildlife Service (USFWS) to conserve fish and wildlife resources.
STATE	
California Endangered Species Act (CESA) of 1984	Fish and Game Code Sections 2050 through 2098 protect California's rare, threatened, and endangered species.
California Code of Regulations	California Code of Regulations Title 14, Division 1, Subdivision 3, Chapter 3, Sections 670.2 and 670.5, list plants and animals of California that are designated as rare, threatened, or endangered.
Fully Protected Species	Fish and Game Code Sections 3511, 4700, 5050, and 5515 prohibit the taking of animals that are classified as fully protected in California.

Nest or Eggs – Take, Possess, or Destroy	Fish and Game Code Section 3503 protects California's birds by making it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird.
Birds of Prey – Take, Possess, or Destroy	Fish and Game Code Section 3503.5 specifically protects California's birds of prey in the orders Falconiformes and Strigiformes by making it unlawful to take, possess, or destroy any such birds of prey or to take, possess, or destroy the nest or eggs of any such bird.
Migratory Birds – Take or Possession	Fish and Game Code Section 3513 protects California's migratory non-game birds by making it unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act, or any part of such migratory non-game bird.
Natural Community Conservation Plan (NCCP) Act of 1991	This act includes provisions for protection and management of state-listed threatened or endangered plants and animals and their designated habitats.
Native Plant Protection Act of 1977	Fish and Game Code Sections 1900 et seq. designate rare, threatened, and endangered plants in the State of California.
Streambed Alteration Agreement	Fish and Game Code section 1600 et seq. requires the CDFG to review project impacts to waterways, including impacts to vegetation and wildlife from sediment, diversions, and other disturbances.
Clean Water Act	By federal law, every applicant for a federal permit or license for an activity which may result in a discharge into a California water body, including wetlands, must request a 401 certification from the Regional Water Quality Control Board so that the proposed activity will not violate state and federal water quality standards.
LOCAL	
San Diego County General Plan – Open Space Element; Conservation Element and Community and Subregional Plans	Provides guiding principles for the conservation of biological resources, such as water, vegetation, and wildlife habitat.
Multiple Species Conservation Plan San Diego County Code Title 8, Div. 6, Ch 5: Biological Mitigation Ordinance Sec. 86.501	These ordinances protect the County's biological resources by guiding development outside of biological resource core areas, and by establishing mitigation standards for discretionary projects. Adoption and implementation of these ordinances enable the County of San Diego to achieve the conservation goals set forth in the Subarea Plan for the Multiple Species Conservation Plan ("MSCP"), adopted by the Board of Supervisors on October 22, 1997.

NCCP Conservation and Process Guidelines	Documents comprising the NCCP Conservation and Process Guidelines include the Southern California Coastal Sage Scrub Natural Community Conservation Planning Conservation Guidelines and the Southern California Coastal Sage Scrub Natural Community Conservation Planning Process Guidelines, both dated November 1993, on file with the Clerk of the Board of Supervisors as Document No. 758984. These documents comprise the State's NCCP Conservation and Process Guidelines by the special rule promulgated by the U.S. Fish and Wildlife Service for the coastal California Gnatcatcher under Section 4(d) of the Endangered Species Act of 1973, published at Section 17.41(b) of Part 17, subchapter B of chapter I, Title 50 of the Code of Federal Regulations.
Habitat Loss Permit	This permit is issued by the Director of the San Diego Planning and Land Use or the Director of the San Diego Department of Public Works in connection with the issuance of a permit or approval authorizing the disturbance or removal of coastal sage scrub. Habitat Loss Permit Ordinance No. 9698 amends Section 86.101 San Diego County Code to authorize the Director of the Department of Public Works to issue Habitat Loss Permits in connection with the review of grading and improvement plans.

SETTING

REGIONAL DESCRIPTION

The OGP would be located in north San Diego County, approximately 3.5 miles northeast of Interstate 15 on State Route (SR) 76, and approximately two miles west of the community of Pala. The project area is east of Monserate Mountain, north of the San Luis Rey River, and west of the community of Pala and the Pala Indian Reservation. The region is primarily rural, consisting of agricultural lands and low-density residential, but also includes large-scale commercial or industrial development such as the Pala Casino and Spa Resort and former aggregate mining operations on the San Luis Rey River.

Some of the most significant native plant communities in the region include Diegan coastal sage scrub, southern riparian forest along the San Luis Rey River, chaparral, and coast live-oak woodlands. While much of the native vegetation in the region has been eliminated and disturbed, extensive tracts of habitat remain and support a diverse array of plants and wildlife communities, including many threatened and endangered species. The following sections describe the predominant vegetation communities and wildlife in the region, discuss the plant and wildlife communities occurring at the project site and its ancillary facilities, and summarize the status and distribution of special status plant and animal species potentially affected by the OGP.

PLANT AND WILDLIFE COMMUNITIES

The plant and wildlife communities occurring within the project area are described below. The project area encompasses the proposed OGP power plant site, a 250-foot radius bordering the site, and the proposed natural gas pipeline alignment extending from Pala Del Norte Road in a southwest direction to Rice Canyon Road. The project area also includes the proposed water truck loading sites located adjacent to Rice Canyon Road approximately one mile north of the SR-76 intersection.

The project area plant communities include abandoned orchards (proposed facilities location), disturbed/developed (existing Pala Substation, and former dairy farm facilities), coast live oak woodlands, Diegan coastal sage scrub, non-native grassland, southern mixed chaparral, ruderal and agricultural lands. The project area also extends into the vegetated portion of the San Luis Rey River flood prone area at two locations that are dominated southern riparian forest and southern cottonwood willow riparian forest. The plant communities and characteristic wildlife of the project area are described in more detail below.

Diegan Coastal Sage Scrub

Diegan coastal sage scrub occurs on the proposed OGE site and along the gas pipeline alignment. This shrub and sub-shrub community typically occurs on gentle to moderate slopes and is often dominated by coastal sagebrush (*Artemisia californica*) with co-dominants of California buckwheat (*Eriogonum fasciculatum* var. *fasciculatum*), California broom (*Lotus scoparius*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), and laurel sumac (*Malosma laurina*).

Wildlife typically found in Diegan coastal sage scrub habitat includes small mammals such as white-footed deer mouse (*Peromyscus maniculatus*), wood rats (*Neotoma* sp.), and Audubon cottontail (*Sylvilagus audubonii*), which attract predators such as coyotes (*Canis latrans*), red-tailed hawks (*Buteo jamaicensis*), and northern harriers (*Circus cyaneus*). Coastal sage scrub provides cover, foraging and breeding habitat for many bird species, including those observed during the 2007/2008 surveys within the project area: Anna's hummingbird (*Calypte anna*), blue-gray and coastal California gnatcatcher (*Polioptila caerulea* and *P. californica californica*), Bewick's wren (*Thyromanes bewickii*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), wrenit (*Chamaea fasciata henshawi*), Say's phoebe (*Sayornis saya*), California and spotted towhee (*Pipilo crissalis* and *P. maculatus*) and white-crowned sparrow (*Zonotrichia leucophrys*). Reptiles found in Diegan coastal sage scrub within the OGP project area during the 2007/2008 surveys include northern red diamond rattlesnake (*Crotalus ruber ruber*), coast horned lizard (*Phrynosoma coronatum*), and side-blotched lizard (*Uta stansburiana*).

Diegan coastal sage scrub supports a number of threatened, endangered, and special status plant and wildlife species, some of which are known to occur in or near the project area.

Coast Live Oak Woodland

Open coast live oak woodland is located east of the power plant site, at scattered locations north of SR 76, and on a hillside at the intersection of SR 76 and Rice Canyon

Road. Coast live oak woodland in the project area is dominated by coast live oaks (*Quercus agrifolia* var. *agrifolia*). Other species recorded in this vegetation community include laurel sumac, sugar bush (*Rhus ovata*), blue elderberry (*Sambucus mexicanus*), southern honeysuckle (*Lonicera subspicata* var. *denudata*), poison oak (*Toxicodendron diversilobum*), and Russian thistle (*Salsola tragus*). Wildlife observed typically in coast live oak woodlands such as those in and near the project area include acorn woodpecker (*Melanerpes formicivorus*), western scrub jay (*Aphelocoma californica obscura*), and western fence lizard (*Sceloporus occidentalis*).

Southern Mixed Chaparral

Southern mixed chaparral is located in the southeastern portion of the project vicinity and in patches within the northern and northwestern portions of the project vicinity. Southern mixed chaparral is often a dense shrub community growing on steep to very steep hillsides and slopes. Typically this habitat supports a variety of species such as laurel sumac, chamise, mission manzanita (*Xylcoccus bicolor*), toyon (*Heteromeles arbutifolia*), and Our Lord's candle (*Hesperoyucca* [Yucca] *whipplei*). No project activities are planned in or adjacent to this vegetation community.

Non-native Grassland

The non-native grassland occurs primarily south of the site where construction staging and secondary access would occur. This habitat is comprised of non-native grasses and herbaceous broadleaf species including foxtail chess (*Bromus madritensis* ssp. *rubens*), short-pod mustard (*Hirschfeldia incana*), filaree (*Erodium cicutarium*), tocalote (*Centaurea melitensis*), and wild oats (*Avena barbata*). This vegetation community is disturbed and dominated by non-native species, but nevertheless provides foraging and nesting habitat for a variety of wildlife.

Riparian Forest

Riparian forest occurs within the project area along the San Luis Rey River. Much of the river channel/floodplain is characterized by southern riparian forest habitat, a dense bottomland plant community dominated by willow species such as arroyo and black willow (*Salix lasiolepis* and *S. gooddingii*). In addition to the southern riparian forest, high quality southern cottonwood willow riparian forest occurs south of the project site and near the gas pipeline alignment south of SR 76. Dominant plant species in this area include western cottonwood (*Populus fremontii*), California sycamore (*Plantanus racemosa*), arroyo and black willow, mulefat (*Baccharis salicifolia*), mugwort (*Artemisia douglasiana*), ragweed (*Ambrosia* sp.), cattails (*Typha* sp.), and poison oak.

The riparian habitat of the San Luis Rey River supports a high density and diversity of wildlife including bird species such as least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), western wood pewee (*Contopus sordidulus*), ash-throated flycatcher (*Myiarchus cinerascens*), yellow warbler (*Dendroica petechia*), yellow-breasted chat (*Icteria virens*), oak titmouse (*Baeolophus inornatus*), song sparrow (*Melospiza melodia*), violet-green swallow (*Tachycineta thalassina*), house wren (*Troglodytes aedon*), and Cooper's hawk (*Accipiter cooperii*). Amphibians and reptiles inhabiting these habitat types include the arroyo toad (*Bufo californicus*), western spadefoot (*Scaphiophus hammondi*), western toad (*Bufo boreas*), two-striped garter snake (*Thamnophis hammondi*), and San Diego ringneck snake

(*Diadophis punctatus similes*). Mammals inhabiting these areas include such species as the brush rabbit (*Sylvilagus bachmani*), Virginia opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), coyote (*Canis latrans*), and bobcat (*Felis rufis*).

Like the coastal sage scrub plant community, riparian habitat along the San Luis Rey River supports many threatened, endangered, and other special-status species.

San Luis Rey River and Other Waterways

The San Luis Rey River runs south of SR 76 in the Project Area, and in the vicinity of the Project Area was diverted southward by mining operations and is now confined to a diked channel located approximately 0.5 mile south of SR 76. Flow in the San Luis Rey River is intermittent, and the closest perennial surface waters to the site are ponds that occur in the riverbed where past mining has exposed the water table in the alluvial aquifer.

Based on the presence of riparian vegetation, proximity, and topographic setting, this riparian area appears to have been part of the San Luis Rey River bank, but is now separated from the river channel by a prism of fill on which the unpaved road between the two former dairy farm areas is constructed. Dominant vegetation consists of California sycamore (*Platanus racemosa*) and Fremont's cottonwood (*Populus fremontii*). Because this area appears to have at one time been associated with the San Luis Rey River bank and still supports riparian vegetation near the river, it is considered potential jurisdictional "waters of the State."

In addition to the San Luis Rey River, six ephemeral drainages and their tributaries occur within the project area which are considered waters of the United States and waters of the State. The six ephemeral drainages do not support riparian or wetland vegetation. All eventually cross under SR 76 and flow to the San Luis Rey River.

SITE DESCRIPTIONS

Power Plant Site

The 8.5-acre site consists mostly of an abandoned lemon orchard on a very old alluvial fan surface that slopes southward to the San Luis Rey River. The northwestern portion of the site was used for orchard debris disposal and supports disturbed Diegan coastal sage scrub. The San Diego Gas & Electric (SDG&E) Pala Substation is located approximately 700 feet southwest of the site, and Pala del Norte Road, a paved private road, generally parallels the western boundary of the site. Ponds from an old aggregate mine and riparian vegetation occurs in the San Luis Rey River just south of SR 76.

Habitat adjacent to the northern and western boundaries of the site consists of coastal sage scrub. Ephemeral drainages that run in a generally north to south direction are located to the west and east of the site. Both of these drainages have been extensively disturbed by orchard land clearing and debris disposal, but are considered waters of the United States and waters of the State. The western drainage is lined with scattered remnants of coastal sage scrub vegetation while the eastern drainage is lined with open coast live oak woodland. An abandoned avocado grove is located east of the eastern drainage. One of three proposed construction laydown areas is located immediately

south of the site between the southern boundary and SR 76 to the south. It is part of the same orchard on which the site would be located and supports non-native grasses and ruderal species.

Linear Facilities

The proposed underground electric transmission line would be located primarily within the roadbed or shoulder of Pala Del Norte Road and within a paved driveway that provides access to the existing substation from Pala Del Norte Road. Orchard, non-native grassland, and Diegan coastal sage scrub occur on or adjacent to the proposed underground transmission line route. No wetland or riparian vegetation occurs on or adjacent to the route.

An approximately 2.4-mile natural gas pipeline lateral (gas pipeline) would connect the site to an existing SDG&E 16-inch gas main that passes approximately 1.3 air miles west of the site. Segment A is approximately 0.4 mile-long segment of the gas pipeline and begins at the site boundary and ends at the southeast corner of the Pala Substation. Segment A would be located entirely within developed areas (i.e., roads and road shoulder) except for a short segment of Diegan coastal sage scrub that would be temporarily disturbed for construction.

Segment B, approximately 0.6 mile-long segment begins at the existing unpaved graded pad at the southeast corner of the Pala Substation and traverses generally steep upland terrain comprised of Diegan coastal sage scrub. This segment ends just south of SR 76 approximately 0.4 air miles southwest of the Pala Substation in a former dairy farm. This segment follows existing unpaved roads throughout the upland terrain, except for the easternmost approximately 400 feet where the route crosses Diegan coastal sage scrub.

Segment C begins generally parallels SR 76 and is approximately 1.0 mile-long segment, which follows existing unpaved roads through the two former dairy farms. While the route of the gas pipeline segment is the existing 12 to 15-foot unpaved road, approximately 700 feet of this segment is along roadway that surrounded by southern riparian forest associated with the San Luis Rey River. The west end of Segment C occurs at a second crossing of SR 76, where the pipeline will cross back over to the north side of the road. Outside of the riparian forest area, Segment C traverses terrain that is exclusively urban/developed and agriculture with no natural habitat on or adjacent to the pipeline route. The portion of Segment C that is within 300 feet of riparian forest would be directionally drilled rather than trenched to avoid potential impacts to sensitive species and habitats.

Segment D is an approximately 0.4-mile-long segment that would be constructed within urban developed land or adjacent to the SR 76 right-of-way. Agricultural land and the highway are adjacent to this segment, with no natural habitat in areas to be disturbed. Oak woodland and riparian habitat occur near the west end of this segment, but on the opposite side of Rice Canyon Road and SR 76 from where pipeline construction would occur. Diegan coastal sage scrub occurs near the east end of this segment, but well beyond the planned limits of pipeline construction disturbances.

The two staging/laydown areas for construction of the pipeline are located south of SR 76 on developed land previously occupied by dairy operations. The northern staging area is bordered by disturbed lands except at to the northwest, where a small patch of southern cactus shrub occurs. The southern staging area is surrounded by disturbed lands, but is immediately west of a high quality stand of southern cottonwood willow riparian forest bordering the San Luis Rey River.

Water Pickup Stations

Water for the project would be supplied by Fallbrook Public Utilities District (FPUD) from two offsite pickup locations that would be constructed, owned, and operated by FPUD. The fresh water pickup station is approximately 5.1 air miles west of the site and is on disturbed land. The area proposed for the water pickup construction is regularly disked, so vegetation within the proposed project site is minimal and consists of weedy, non-native species. A poorly defined drainage is located outside and approximately 200 feet south of the proposed project site, and is vegetated with non-native species. The proposed project site is bordered by a commercial plant nursery to the east.

The reclaimed water pickup station would be located within an existing FPUD water reclamation plant facility on disturbed lands approximately 8.5 air miles from the site. The proposed site itself is located on disturbed, ruderal lands, and is surrounded by non-native grassland.

Access Roads/Landscaping/Fuel Modification Zone²

Access to the site for operations activities will be via a newly constructed driveway from Pala Del Norte Road. The bridge would be designed so that required grading and bridge footings for the access road are outside the limits of federal and state jurisdictional waters. A second driveway would be constructed from SR 76 at the south side of the site. The second driveway would be used for access during construction but would not normally be used during operations. The second driveway would be constructed with a concrete apron adjacent to SR 76 and then have crushed rock road surfacing into the plant.

An 8-foot-tall metal fabric security fence with barbed wire or razor wire on top would enclose the site. Areas inside the plant security fencing that are not occupied by structures or paved roads would be surfaced with crushed rock. Outside the security fence, surfaces disturbed by construction would be landscaped in accordance with the County zoning ordinance and the final approved Fire Protection Plan. Only native species would be used for landscaping. The final approved Fire Protection Plan is expected to include requirements for fuel modification within 125 feet of equipment and structures and within 50 feet of site access roads. The landscaping plan and fuel modification zones are subject to review and approval by the Fire Marshal. Plants that are prohibited by the Fire Protection Plan will not be used within the fuel modification zones.

² A fuel modification zone is a strip of land adjacent to structures or roads where combustible vegetation has been removed.

Transmission System Upgrades

Transmission system upgrades will be required beyond the Pala Substation, including reconductoring, changing relay settings, and other work. Transmission system upgrades will be performed by SDG&E and will be finalized in conjunction with the interconnecting agreement. The reconductoring will take place entirely within the existing SDG&E transmission line right-of-way between the Monserate and Pala Substations, a distance of approximately seven miles. Reconductoring work consists of preparing existing transmission line poles to receive new conductors, which will involve replacing 33 of the 117 existing poles, installing nine new poles, and removing two existing poles. A preliminary analysis of potential biological impacts of the reconductoring is discussed below, based on preliminary site design (TRC 2008g). When final design is complete, a final assessment of impacts to biological resources would be made and mitigation measures developed as part of the overall transmission system upgrade design work completed by SDG&E.

SPECIAL STATUS SPECIES

The following tables identify the sensitive species that have been seen or have the potential to occur in the project vicinity.

Biological Resources Table 2
Special Status Plants Potentially Occurring in the Project Area

Common Name	Scientific Name	Status** (Federal, State, CNPS, San Diego)
Brewers' calandrinia	<i>Calandrinia breweri</i>	--/--/CNPS 4.2/D/--
California screw-moss	<i>Tortula californica</i>	--/--/CNPS 1B.2/--
Chaparral nolina	<i>Nolina cismontane</i>	--/--/CNPS 1B.2/MSCP-A
Chaparral sand-verbena	<i>Abronia villosa</i> var. <i>aurita</i>	--/--/CNPS 4.2/ MSCP-A
Cooper's rein orchid	<i>Piperia cooperi</i>	--/--/CNPS 4.2/ MSCP-D
Englemann oak*	<i>Quercus engelmannii</i>	--/--/CNPS 4.2/ MSCP-D
Felt-leaved monardella	<i>Monardella hypoleucca</i> ssp. <i>Lanata</i>	--/--/CNPS 1B.3/ MSCP-A
Gander's ragwort	<i>Packera</i> [<i>Senecio</i>] <i>ganderi</i>	--/--/CNPS 4/2/ MSCP-A
Graceful tarplant	<i>Holcarpha virgata</i> elongate	--/--/CNPS 4/2/ MSCP-D
Hall's monardella	<i>Monardella macrantha</i> ssp. <i>Hallii</i>	--/--/CNPS 1B.3/ MSCP-A
Jaeger's mile-vetch	<i>Astragalus pachypus</i> var. <i>jaegeri</i>	--/--/CNPS 1B.1/ MSCP-A
Lakeside ceanothus	<i>Ceanothus cyaneus</i>	--/--/CNPS 1B.2/ MSCP-A-NE
Lewis sun cup	<i>Camissonia lewisii</i>	--/--/CNPS 1B.1 MSCP-A
Mesa horkelia	<i>Horkelia cuneata</i> ssp. <i>puberula</i>	--/--/CNPS 1B.1/ MSCP-A-NE
Nevin's barberry	<i>Berberis nevinii</i>	FE/SE/CNPS 1B.1/ MSCP-A-NE
Orcutt's brodiaea	<i>Brodiaea orcutti</i>	--/--/CNPS 1B.1/ MSCP-A
Parry's tetracoccus	<i>Tetracoccus dioicus</i>	--/--/CNPS 1B.3, MSCP-A
Rainbow manzanita	<i>Arctostaphylos rainbowensis</i>	--/--/CNPS 1B.1/ MSCP- A
Ramona horkelia	<i>Horkelia truncate</i>	--/--/CNPS 1B.3/ MSCP-A
Robinson's peppergrass	<i>Lepidium virginicum</i> var. <i>robinsonii</i>	--/--/CNPS 1B.2, A
San Diego adolphia	<i>Adophia californica</i>	--/--/CNPS 2.1/B
San Diego ambrosia	<i>Ambrosia pumila</i>	FE/_/_/CNPS 1B.1/A-NE
San Diego sunflower	<i>Hulsea californica</i>	--/--/CNPS 1B3/A
San Diego thornmint	<i>Acanthomintha ilicifolia</i>	FT/SE/CPNS 1B.1/A-NE
San Miguel savory	<i>Satureja chandleri</i>	--/--/CNPS 1B.2/A
Slender-horned spineflower	<i>Dodecahema leptoceras</i>	FE/SE/CHPS 1B.1/--
Small flowered microseris	<i>Microseris douglasii</i> var. <i>platycarha</i>	--/--/CNPS 4.2/D
Southwestern spiny rush	<i>Jucus acutus</i> ssp. <i>Leopoldii</i>	--/--/CNPS 4/2/D
Spreading navaretia	<i>Navaretia fossalis</i>	FT/--/CNPS 1B.1/A
Sticky dudleya	<i>Dudleya viscida</i>	--/--/CNPS 1B.2/A
Summer holly	<i>Comarostaphylis diversifolia</i> ssp. <i>Diversifolia</i>	--/--/CNPS 1B.2/A
Palmer's goldenbush	<i>Ericameria palmeri</i> ssp. <i>Palmeri</i>	--/--/CNPS 2.2, B-NE
Thread-leaved brodiaea	<i>Brodiaea filifolia</i>	FT/SE/CNPS 1B.1/A
Vail Lake ceanothus	<i>Ceanothus ophiochilus</i>	FT/SE/CNPS 1B.1/--
Western dichondra	<i>Dichondra occidentalis</i>	--/--/CNPS 4.2/D

* See **Status Legend** following Biological Resource Table 3 to translate the status codes.

* **Bolded** species names are those observed on or near the proposed project site or linear facilities during the 2007/08 field surveys.

Biological Resources Table 3
Special Status Wildlife Potentially Occurring in the Project Area

Common Name	Scientific Name	Status (Federal, State, MSCP)
Fish		
Arroyo chub	<i>Gila orcuttii</i>	CSC/MSCP 1
Invertebrates		
Quino checkerspot butterfly	<i>Euphydryas editha quino</i>	FE, MSCP 1
Hermes copper	<i>Lycaena hermes</i>	MSCP 1
Monarch butterfly	<i>Danaus plexippus</i>	MSCP 2
Amphibians		
Arroyo toad	<i>Bufo californicus</i>	FE, CSC, MSCP-1
California red-legged frog	<i>Rana aurora draytoni</i>	FT, CSC, MSCP-1
Western spadefoot	<i>Spea hammondi</i>	CSC, MSCP-2
Reptiles		
Coast (San Diego) horned lizard	<i>Phrynosoma coronatum</i>	CSC, MSCP-2
Coast patch-nosed snake	<i>Salvadora hexalepis virgulata</i>	CSC,
Coastal western whiptail	<i>Aspidoscelis tigris stejnegeri</i>	MSCP-2
Coastal rosy boa	<i>Charina trivirgata roseofusca</i>	MSCP-2
Coronado skink	<i>Eumeces skiltonianus interparietalis</i>	CSC, MSCP-2
Northern red-diamond rattlesnake	<i>Crotalus ruber ruber</i>	CSC, MSCP-2
Orange-throated whiptail	<i>Aspidoscelis hyperythra</i>	CSC, MSCP-2
San Diego banded gecko	<i>Coeonyx variegates abbottii</i>	MSCP-1
San Diego ringneck snake	<i>Diadophis punctatus similis</i>	MSCP-2
Silvery legless lizard	<i>Anniella pulchra pulchra</i>	CSC, MSCP-2
South coast garter snake	<i>Thamnophis sirtalis novum</i>	CSC, MSCP-2
Southwestern pond turtle	<i>Actinemys marmorata pallida</i>	CSC, MSCP-2
Two-striped garter snake	<i>Thamnophis hammondi</i>	CSC, MSCP-1
Birds		
Bell's sage sparrow	<i>Amphispiza belli belli</i>	BCC, SCS, MSCP-1
Burrowing owl	<i>Oto cunicularia</i>	CSC, MSCP-1
California gull	<i>Larus californicus</i>	CSC, MSCP-2
California horned lark	<i>Eremophila alpestris actia</i>	CSC, MSCP-2
Coastal cactus wren	<i>Campylorhynchus brunneicapillus sandiegensis</i>	BCC, CSC, MSCP
Coastal California gnatcatcher	<i>Polioptila californica californica</i>	FT, CSC, MSCP-1
Common barn-owl	<i>Tyto alba</i>	MSCP-1
Cooper's hawk	<i>Accipiter cooperii</i>	CSC, MSCP-1
Double-crested cormorant	<i>Phalacrocorax auritus</i>	CSC
Least Bell's vireo	<i>Vireo bellii pusillus</i>	FE, CE, MSCP-1
Northern harrier	<i>Circus cyaneus</i>	CSC, MSCP-1
Osprey	<i>Pandion haliaetus</i>	CSC
Southern California rufous-crowned sparrow	<i>Aimophila ruficeps canescens</i>	CSC, MSCP-1
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	FE, CE, MSCP-1
White-tailed kite	<i>Elanus leucurus</i>	CFP, MSCP-1
Yellow-breasted chat	<i>Icteria virens</i>	CSC, MSCP-1
Yellow warbler	<i>Dendroica petechia brewsteri</i>	CSC, MSCP-2

Common Name	Scientific Name	Status (Federal, State, MSCP)
Mammals		
American badger	<i>Taxidea taxus</i>	CSC, MSCP-2
Big free-tailed bat	<i>Nyctinomops macrotis</i>	CSC, MSCP-2
Mexican long-tongued bat	<i>Choeronycteris mexicana</i>	CSC, MSCP-2
Pallid bat	<i>Antrozous pallidus</i>	CSC, MSCP-2
San Diego blacktailed jackrabbit	<i>Lepus californicus bennettii</i>	CSC, MSCP-2
San Diego desert woodrat	<i>Neotoma lepida intermedia</i>	CSC, MSCP-2
Western mastiff bat	<i>Eumops perotis californicus</i>	CSC, MSCP-2

Status Codes:

Federal: FE - Federally listed endangered: species in danger of extinction throughout a significant portion of its range
FT - Federally listed, threatened: species likely to become endangered within the foreseeable future

State SE - State listed, endangered
ST = state listed as threatened
SR - State listed, rare

California Native Plant Society (source: CNPS 2007)

List 1B - Rare, threatened, or endangered in California and elsewhere
List 2 - Rare, threatened, or endangered in California but more common elsewhere
List 3 - Plants which need more information
List 4 - Limited distribution – a watch list
0.1 - Seriously threatened in California (high degree/immediacy of threat)
0.2 - Fairly threatened in California (moderate degree/immediacy of threat)
0.3 - Not very threatened in California (low degree/immediacy of threats or no current threats known)

County of San Diego Multiple Species Conservation Plan

List A - Plants rare, threatened or endangered in California and elsewhere
List B - Plants rare, threatened, or endangered in California but more common elsewhere
List C - Plants which may be quite rare, but need more information to determine true rarity status
List D - Plants of limited distribution, uncommon, but need more information to determine true rarity status
NE – Listed in the Multiple Species Conservation Program as a narrow endemic, a species confined to a specific geographic region, soil type, and/or habitat;

Group 1 - Species has a very high level of sensitivity, either because it is listed as threatened or endangered or it has very specific natural history requirements.

Group 2 - Species becoming less common, but not so rare that extirpation or extinction is imminent. Species tend to be prolific within suitable habitat types.

To determine the status of special-status species in the project area, rare plant surveys were conducted at the appropriate time of year to establish presence/absence of rare plant species, and protocol-level surveys for threatened or endangered wildlife (least Bell's vireo, southwestern willow flycatcher, coastal California gnatcatcher, arroyo toad, Quino checkerspot butterfly, and Stephen's kangaroo rat) were also conducted in 2007/2008 (OGE 2008a). Based on these survey results, nine endangered, threatened, or special-status species were confirmed present at or near the site. An additional two special-status species could not be ruled out because suitable habitat is available and surveys could not conclusively demonstrate their absence. All nine species are discussed below.

Engelmann Oak

Engelmann oak is a native medium-sized evergreen tree in the oak family that typically lives 50 to 150 years, with some living up to 350 years. This species' range has been reduced due to historic climate change and contemporary urban encroachment, so that scattered trees are now found only in the San Gabriel Mountains and throughout the Peninsular Ranges. Engelmann oak persists where rainfall is adequate, frosts rare, and summers relatively mild at an elevation ranging from 120 to 1,300 m. One Engelmann oak and several saplings were observed within the site and within the ephemeral drainage east of the site.

Parry's Tetracoccus

Parry's tetracoccus is a native evergreen shrub in the spurge family that blooms between April and May, and can reach heights of six feet or greater. It occurs in chaparral and coastal sage scrub habitats at an elevation ranging from 165 to 1,000 m and is typically found in chaparral on gabbro and metavolcanic soils. Approximately 83 Parry's tetracoccus were observed during floristic and other surveys for the project, with 23 plants located within the site boundaries or proposed fuel reduction zone. Additional individuals occur north of the study area boundary. The numbers of individual plants are estimates because Parry's tetracoccus plants send up multiple stems from one root system and often grow close together in clumps.

San Diego Desert Woodrat

This subspecies occurs in coastal sage scrub, prefers moderate to dense canopies, and is abundant in areas of rocky outcrops, cliffs, and slopes. The California Natural Diversity Data Base (CDFG) document this subspecies within three miles of the project site, and a *Neotoma* sp. nest was observed at the base of an Engelmann oak located on the project site during field surveys conducted on June 20, 2007. Additional woodrat nests have been observed in coastal sage scrub habitat surrounding the site and within or near the project linear facilities. It could not be determined if the nests were created by the dusky-footed woodrat (*Neotoma fuscipes*), which is a non-special-status species that could occur in the area, or were created by the San Diego desert woodrat (*Neotoma lepida intermedia*). In the absence of survey data to confirm the species identity of the *Neotoma* on site, the rarer San Diego desert woodrat is considered by staff to be present in the project area.

Coastal California Gnatcatcher

Coastal California gnatcatcher is an obligate, permanent resident of coastal sage scrub below an elevation of 2,500 feet in southern California and Baja California. A pair of coastal California gnatcatchers were documented successfully nesting within 200 feet of the gas pipeline alignment west of the site during protocol surveys for the subspecies conducted in spring 2008. The pair was observed during all six surveys, and successfully fledged three young. By the last survey (May 2, 2008), the pair appeared to be constructing a second nest and all three juvenile birds were seen in the area with their parents. Coastal California gnatcatchers should be considered a potential breeding resident of all coastal sage scrub habitat in and near the project area.

Cooper's Hawk

Cooper's hawks are found year-round throughout most of the state, nesting in trees or high places that are typically found in open woodlands or in riparian areas. Cooper's hawks were observed flying over the site during surveys in 2008. Much of the Project Area provides foraging habitat for this species, and potential nesting habitat occurs in the San Luis Rey River south of the project area.

Least Bell's Vireo

Least Bell's vireos are restricted to riparian habitats found mostly in southern California lowlands. The subspecies is vulnerable to nest parasitism from the brown-headed cowbird (*Molothrus ater*). This subspecies have been documented as breeding

throughout the San Luis Rey River (CNDDDB 2008). Eight protocol-level surveys conducted from April 14 to June 23, 2008 detected eight least Bell's vireos in the southern riparian cottonwood habitat south of the project site. These observations included seven adult vireos (three pairs and one single male) and one juvenile vireo (with one of the adult pairs). Two singing male least Bell's vireos were first heard and observed during the first survey, on April 14, along the dirt road south of SR 76 that will serve as the alignment for the gas pipeline. The survey data indicate that at least one pair and possibly more least Bell's vireos are nesting in riparian habitat immediately adjacent to the proposed gas pipeline route. All riparian habitat on the San Luis Rey River within the project area should be considered high quality least Bell's vireo breeding habitat.

Southern California Rufous-Crowned Sparrow

Southern California rufous-crowned sparrow can be common in sage scrub, burned chaparral, and along firebreaks in mature chaparral. They prefer open shrubby habitat on rocky, xeric (dry) slopes. CNNDDB records document this subspecies within three miles of the site and it was observed in the coastal sage scrub adjacent to the site during the 2008 field surveys. The coastal sage scrub habitat along the gas pipeline alignment provides potential habitat for this subspecies.

Southwestern Willow Flycatcher

Southwestern willow flycatchers occur in cottonwood-willow riparian forest and have been recorded within two miles of the Project Area on the San Luis Rey River (CNDDDB 2008). No southwestern willow flycatchers were observed on the site during protocol field surveys conducted in spring 2008, but all riparian habitat on the San Luis Rey River should be considered potential breeding habitat for this species.

San Diego Horned Lizard

San Diego horned lizard subspecies inhabits coastal sage scrub and chaparral, occurring on friable, rocky, or shallow sandy soils. CNDDDB records document this subspecies approximately 3.5 miles from the site, and several individuals were observed during the 2008 surveys in coastal sage scrub within the project linear corridor west of the site. Chaparral and coastal sage scrub habitats within the project area should be considered suitable habitat for this subspecies.

Northern Red Diamond Rattlesnake

Northern red diamond rattlesnake occurs in southern California and Baja California from the coast to eastern mountain slopes in rocky areas and dense vegetation such as chaparral, woodland, grassland, and desert. CNDDDB records of this subspecies have been documented approximately three miles from the project site. A northern red diamond rattlesnake was observed immediately west of the site during a field survey for cultural resources conducted on April 14, 2007. Therefore, coastal sage scrub and chaparral habitats within the project area are considered to support this subspecies.

Arroyo Toad

The arroyo toad frequents third order or larger washes, streams, and arroyos in semiarid parts of the southwest. Stream substrates used for breeding range from sands

to small cobble, with sandy banks supporting mule fat (*Baccharis salicifolia*), willows (*Salix* spp.), cottonwoods (*Populus* sp.), or sycamores (*Platanus racemosa*). The arroyo toad has been documented within the San Luis Rey River flood prone area throughout the reach located adjacent to and partially within the Project Area (USFWS 2007, CNDDDB 2008).

Arroyo toad surveys conducted by Cadre Environmental (OGE 2008a Appendix 6.6-H, Results of Arroyo Toad Habitat Assessment for the Orange Grove Project, San Diego County) concluded that no suitable arroyo toad breeding habitat is present within the two portions of the San Luis Rey River southern cottonwood willow riparian forest (depicted as Area 1 and 2 on Attachment A, Appendix 6.6H, OGE 2008a) located within the Project Area. However, high quality arroyo toad foraging, movement, and aestivation habitat is present near one segment of the gas pipeline alignment in this forest. Drainages #5 and #6 (Rice Canyon Creek and Courser Creek) could also provide movement corridors for arroyo toads. The agricultural lands on either side of these drainages do not provide high quality upland aestivation habitat, but might infrequently utilize this area when foraging or searching for upland aestivation habitat.

ANALYSIS OF IMPACTS

METHOD AND THRESHOLD FOR DETERMINING SIGNIFICANCE

The determination of whether a project has a significant effect on biological resources is based on the best scientific and factual data that staff could review for the project. The significance of the activity is in large part dependent on the setting and the existing LORS for the particular site. For example, disturbance during construction on a “brownfield” (i.e., developed) site may not be significant, but this same activity on a “greenfield” (i.e., undeveloped) site may be significant because of the greater likelihood of sensitive biological resources in the area. Generally, staff relies on the rules and regulations of USFWS, USACE, and CDFG in assessing significance. Those agencies have special expertise in addressing biological resources and staff finds that absent unusual circumstances, compliance with the requirements they have adopted or would adopt but for the Commission’s exclusive jurisdiction will be sufficient to avoid or mitigate significant adverse effects. Staff also considered the County of San Diego’s ordinances protecting biological resources and guidance contained within the North County Multiple Species Conservation Program in developing the impact analysis and mitigation measures discussed below.

Significant biological resource impacts would occur if special-status species, such as state- or federal-listed species, state fully protected species, candidates for state or federal listing and/or Species of Special Concern, are likely to be impacted from the construction or operation of the proposed project. Interruption of species migration, reduction of native fish, wildlife and plant habitat, causing a fish or wildlife population to drop below self-sustaining levels, and disturbance of wetlands, marshes, riparian areas or other wildlife habitat would also be considered significant impacts. Harassment of a protected species, even if it does not result in the loss of habitat or reduction in population numbers, would still be considered a significant impact. Substantial degradation of the quality of the environment or environmental effects that are

individually limited, but cumulatively considerable, would also be considered significant. Compliance with LORS is typically sufficient to avoid or mitigate these impacts.

DIRECT AND INDIRECT IMPACTS AND MITIGATION

The CEQA Guidelines define direct impacts as those impacts that result from the project and occur at the same time and place. Indirect impacts are caused by the project, but can occur later in time or farther removed in distance while still reasonably foreseeable and related to the project. The potential impacts discussed in this analysis are those most likely to be associated with construction and operation of the project.

Projects in developed sites typically have less of an impact on sensitive biological resources because they lack suitable habitat on site. However, such projects are evaluated for the impacts they could have on surrounding areas that remain in more natural conditions and support sensitive biological resources.

Direct Impacts to Plant Communities and Wildlife

Construction of the OGP will result in direct impacts to plant communities and wildlife from vegetation clearing, grading, and trenching within the site and along linear facilities. Biological Resources Table 4 summarizes the direct impacts to plant communities from each of the project features. Biological Resources Table 5 summarizes the potential impacts to special status species resulting from construction and operation of the OGP.

**Biological Resources Table 4
Construction Impacts to OGP Plant Communities**

Habitat	Impact Area (acres)							
	Plant Site	Linear Facilities	Site Access	Laydown Areas	Fuel Modification Zone	Reclaimed Water Pickup	Fresh Water Pickup	Total
Coastal Sage Scrub	0.3	7.5	0.1	0.0	1.4	0.0	0.0	9.3
Urban-developed	0.0	8.3	0.0	0.0	0.3	0.3	0.1	9.0
Disturbed	0.0	2.0	0.0	0.0	0.0	0.1	0.0	2.1
Riparian	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Annual Grassland	0.1	0.1	0.2	2.5	0.4	0.0	0.1	3.4
Riparian	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agriculture	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0
Orchard	7.9	0.0	0.7	2.5	0.1	0.0	0.0	11.2
TOTAL	8.3	18.9	1.0	5.0	2.2	0.4	0.2	36.0

Biological Resources Table 5
Special-Status Species - Summary of Impacts/Mitigation

Species	Status	Impact/Mitigation
Englemann oak <i>Quercus engelmannii</i>	CNPS 4.2 MSCP-D	Impact: Loss of one mature oak and several saplings. Mitigation: Incorporate Englemann oak in landscaping plan (VIS-2).
Parry's tetracoccus <i>Tetracoccus dioicus</i>	CNPS 1B.3, MSCP-A	Impact: Loss of 23 Parry's tetracoccus plants. Mitigation: Implement Parry's tetracoccus mitigation plan (BIO-11); fence/protect Parry's tetracoccus plants as Environmentally Sensitive Areas (ESAs) (BIO-9).
Arroyo toad <i>Bufo californicus</i>	FE, CSC, MSCP-1	Direct: Potential direct impacts from construction activities adjacent to riparian forest; water quality impacts to downstream breeding habitat in San Luis Rey River. Mitigation: Limited construction period (BIO-7); protect riparian habitat as an ESA (BIO-9); install toad exclusion fence in vicinity of riparian habitat (BIO-12); protect drainages and implement Best Management Practices (BMPs) & water quality protection measures (BIO-6, 9);
San Diego horned lizard <i>Phrynosoma coronatum blainvillii</i>	CSC, MSCP-2	Direct: Potential mortality due to grading, vegetation removal, trapping within trenches; loss of cover, foraging habitat from loss of coastal sage scrub. Mitigation: Acquire 18.6 acres of coastal sage scrub compensatory mitigation lands (BIO-10); implement BMPs, including checking open trenches (BIO-6); protect coastal sage scrub in ESA (BIO-9).
Northern red-diamond rattlesnake <i>Crotalus ruber ruber</i>	CSC, MSCP-2	Direct: Potential mortality due to grading, vegetation removal, trapping within trenches; loss of cover, foraging habitat from loss of coastal sage scrub. Mitigation: Acquire 18.6 acres of coastal sage scrub compensatory mitigation lands (BIO-10); implement BMPs, including checking open trenches (BIO-6); protect coastal sage scrub in ESA (BIO-9).
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT, CSC, MSCP-1	Impact: Potential loss of nest, eggs, or young; loss of coastal sage scrub breeding and foraging habitat; disturbance of nesting activities. Mitigation: Limited construction period (BIO-7); protect coastal sage scrub in ESA (BIO-9); acquire 18.6 acres of coastal sage scrub compensatory mitigation lands (BIO-10).
Cooper's hawk <i>Accipiter cooperii</i>	CSC, MSCP	Impact: Potential loss of nest, eggs, or young; loss of breeding and foraging habitat; disturbance of nesting activities. Mitigation: Limited construction period (BIO-7); conduct pre-construction nest surveys and implement avoidance measures (BIO-8).
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE, CE, MSCP	Impact: Potential loss of nest, eggs, or young due to disturbance; disturbance of nesting activities, increased risk of cowbird parasitism. Mitigation: Limited construction period (BIO-7); protect riparian habitat as an ESA (BIO-9).
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	CSC MSCP	Impact: Potential loss of nest, eggs, or young; loss of coastal sage scrub breeding and foraging habitat; disturbance of nesting activities Mitigation: Limited construction period (BIO-7); protect coastal sage scrub in ESA (BIO-9); acquire 18.6 acres of coastal sage scrub compensatory mitigation lands (BIO-10).
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	CSC	Direct: Potential mortality due to grading, vegetation removal, trapping within trenches; loss of cover, foraging habitat from loss of coastal sage scrub. Mitigation: Acquire 18.6 acres of coastal sage scrub compensatory mitigation lands (BIO-10); protect coastal sage scrub in ESA (BIO-9).

Most of the direct impacts to native plant communities and sensitive species results from clearing and trenching associated with gas pipeline construction. Of the 9.3 acres of coastal sage scrub to be impacted by the OGP, 7.5 acres would be the result of disturbance from gas pipeline construction. The majority of this coastal sage scrub impact would result from construction on the steep hillside west of the existing SDG&E substation (Segment B). Because of the steep terrain, a maximum 40-foot wide swath within coastal sage scrub vegetation may be disturbed to create a safe, level construction surface for trenching and backfilling of the pipeline.

The impacts to coastal sage scrub habitat along the pipeline alignment will be temporary because disturbed soils within the work area will be seeded with an erosion control mix of native species, and allowed to revegetate naturally (Back 2008). No routine maintenance and removal of woody vegetation will occur along the gas pipeline (Back pers. comm.). Future repair work on the pipeline alignment involving soil disturbance and vegetation removal would require environmental review and permitting by the County of San Diego (Back 2008).

Fuel modification zones around the OGP site and access road will result in loss of 1.4 acres of coastal sage scrub. The applicant proposes a fuel modification zone of 125 feet around equipment and structures, and 50 feet along each side of the access road to the site (OGE 2008a). CDFG (2008) recommends that fuel reduction zones be reduced to 100 feet around structures and 30 feet along access roads, unless facilities or public safety would be clearly threatened. Staff concurs with CDFG's recommendation, which is described in more detail in staff's proposed Condition of Certification **BIO-9**.

The remaining 0.4 acres of coastal sage scrub loss results from construction of the site and its access road. Project construction will also result in impacts to 3.4 acres of non-native grassland, mostly from use of the laydown area on the site.

Temporary and permanent losses of 9.3 acres of coastal sage scrub and 3.4 acres of non-native grassland contribute to the significant cumulative loss of these habitat types in the northern San Diego County region. Unmitigated loss of these habitat types is inconsistent with the San Diego County Biological Mitigation Ordinances and the draft North County Multiple Species Conservation Program (NCMSCP). To compensate for these losses and to achieve consistency with San Diego County ordinances and the NCMSCP, the applicant must secure a Habitat Loss Permit from the County of San Diego Public Works Department. The Habitat Loss Permit includes acquisition of credits in a mitigation approved by the CDFG, the USFWS, and the San Diego Department of Public Works, as described in staff's proposed Condition of Certification **BIO-10**.

The applicant proposed to mitigate for impacts to Diegan coastal sage scrub at a 2:1 ratio, and non-native grassland at a 0.5:1 ratio, consistent with the Biological Mitigation Ordinance and the NCMSCP. The Red Mountain Mitigation Bank recently received preliminary approval from the CDFG and USFWS and will likely be selected as the mitigation bank for this project (TRC 2008j). However, this mitigation bank does not offer credits for non-native grassland habitat. The applicant has therefore proposed mitigating for non-native grassland with mafic southern mixed chaparral, and has requested approval for this out-of-kind mitigation from the USFWS and other resource agencies project (TRC 2008j). Staff concurs with the applicant's proposal to purchase

credits at the Red Mountain Mitigation Bank if it meets with the approval of CDFG, USFWS, and the County of San Diego. Other mitigation measures that must be implemented to avoid potentially significant impacts to Diegan coastal sage scrub are described in Conditions of Certification **BIO-7**, **8**, and **9**.

Construction of the OGP would result in the loss of 2.1 acres of disturbed habitat and 9.1 acres of urban/developed area. No special status species are likely to use this cover type for nesting, foraging, or cover, and the site provides only marginal value to common wildlife species. The loss of disturbed, urban areas associated with construction of the OGP is therefore considered less than significant, and no mitigation is required to offset this loss.

Birds nesting within and near the footprint of the site and the gas pipeline alignment could be directly impacted by construction activities because the six-month construction schedule is slated to begin in April 2009, the peak of the nesting season for many birds. Construction activities or vegetation removal could impact nesting activity, possibly resulting in the incidental loss of fertile eggs or nestlings, or could lead to nest abandonment. Loss in eggs or young of birds would violate the Migratory Bird Treaty Act, and in the case of listed species such as least Bell's vireo, coastal California gnatcatcher, and southwestern willow flycatcher, would be considered take. Implementation of Conditions of Certification **BIO-6**, **7**, and **9** would help avoid impacts to nesting birds. If staff's proposed condition **BIO-6**, the limited operating period for construction within coastal sage scrub and riparian habitat, cannot be implemented, pre-construction surveys would be needed, as described in staff's proposed Condition of Certification **BIO-8**. These surveys need to be conducted in all areas subject to construction impacts, including disturbed sites, because landscaping trees and shrubs in orchards and ruderal areas could support nesting activities by disturbance-tolerant species such as western scrub jay and house finch (*Carpodacus mexicanus*).

In accordance with recommendations from CDFG (2008) and guidance in the North County Multiple Species Conservation Program, construction within 500 feet of riparian habitat should be avoided during the nesting season, March 15 through September 15 (**BIO-7**). To avoid impacts to coastal California gnatcatchers and other species nesting in coastal sage scrub habitat, construction activities with coastal sage scrub should be avoided from February 15 through August 31 (**BIO-7**). If construction activities cannot be avoided during these periods, pre-construction surveys nest surveys shall be conducted and avoidance measures implemented, as described in staff's Condition of Certification **BIO-8**.

Trenching and backfilling for installation of the natural gas pipeline and electric transmission line, vegetation clearing, and grading on the power plant site could cause mortality or injury to small mammals and reptiles inhabiting coastal sage scrub habitat, including special status species such as San Diego horned lizard, northern red diamond rattlesnake, and San Diego woodrat. Such direct impacts are expected to be minimal because these animals are mobile and are capable of escaping construction activities. However, small mammals and reptiles could fall into the construction trench and be unable to escape, making them vulnerable to temperature stress, desiccation, and predation. To reduce such potential impacts to less than significant levels, passive escape ramps shall be installed to allow wildlife species to exit when the trenches are

left open during the night. The Designated Biologist will check trenches daily to remove individuals that may enter the trench (**BIO-6**).

In addition to direct impacts from construction, the loss of cover, foraging and breeding habitat in coastal sage scrub contributes to the cumulative loss of these native plant communities. Implementation of Condition of Certification **BIO-10**, which calls for offsetting the impacts of coastal sage scrub impacts with compensatory off-site habitat acquisition, will reduce these potential impacts to less than significant levels.

An estimated 83 Parry's tetracoccus were observed within coastal sage scrub habitat during 2007/2008 floristic surveys; 23 of these will be impacted by grading within the site and by fuel reduction activities. An assessment of the regional impact of this loss was conducted by analyzing the 17 CNDDDB occurrence records for this species within a 15 mile radius of the project site, excluding those detected in the OGP area (OGE 2008g). This analysis revealed at least 500 individual Parry's tetracoccus occur within this area, indicating that the loss of 23 individual plants will not likely jeopardize this species locally or regionally. However, this loss contributes to the regional cumulative loss of Parry's tetracoccus and other rare plants associated with coastal sage scrub habitat. To reduce this cumulative impact to less than significant levels, mitigation measures described in Condition of Certification **BIO-9** and **BIO-11** shall be implemented. These conditions involves implementation of an on-site revegetation plan to replace the Parry's tetracoccus lost during construction, and to protect individual plants near construction and fuel reduction activities from inadvertent impacts.

Operation of heavy equipment and surface-disturbing activities within the southern cottonwood willow riparian habitat of the San Luis Rey River could have direct impacts to wildlife even if all such activities are confined to disturbed areas such as unpaved roads and disturbed agricultural lands. In particular, arroyo toads could be directly impacted by construction activities within the segment of the gas pipeline near the southern cottonwood willow riparian habitat (Area #2 shown in Attachment A, Arroyo Toad Habitat Assessment, Appendix 6.6H – Results of Arroyo Toad Habitat Assessment for the Orange Grove Project, San Diego County, OGE 2008a). During the breeding season (March 1 through August 31), arroyo toads may utilize portions of the dirt road slated for gas pipeline construction for movement, foraging, and temporary burrowing. Potential significant impacts to arroyo toads can be avoided with implementation of Condition of Certification **BIO-12**, creation of a toad exclusion fence between the dirt road and the riparian habitat to the south, and with other measures described in Conditions of Certification **BIO-7** and **BIO-9**.

Future Impacts to Gregory Canyon Landfill Mitigation Lands

The westernmost portion of the Segment C of the gas pipeline passes through highly disturbed lands that were the site of the former Verboom Dairy. This abandoned dairy farm has been proposed for use as mitigation lands for impacts resulting from the Gregory Canyon Landfill project (San Diego County Department of Public Health 2007). The proposed habitat creation and enhancement areas comprise approximately 212.6 acres north of the San Luis Rey River, and would be suitable for development of coast live oak woodland, coastal sage scrub and/or riparian transitional habitat (San Diego County Department of Public Health 2007). The CDFG (2008) and the USFWS (Moreno 2008) expressed concern about the OGP gas pipeline impacting these future

mitigation lands. To address these concerns, the applicant has proposed mitigating for potential impacts to 2.2 acres of future mitigation lands at a 2:1 ratio, with acquisition of 4.4 acres of oak woodland credits in a suitable off-site mitigation bank (Back 2008). Staff concurs with this measure if it meets with the approval of CDFG and USFWS, and has included it in staff's proposed Condition of Certification **BIO-13**.

Transmission System Upgrades

The transmission line upgrades will involve reconductoring and other system upgrades of San Diego Gas & Electric Company's (SDG&E's) 69-kilovolt (kV) transmission line from the Monserate to Pala Substation. Impacts to biological resources from this upgrade work result from ground disturbance associated with pole replacements or improvements, and establishing laydown and stringing areas. A preliminary analysis of impacts (2008g, Attachment 11, Environmental Impact Analysis for the Reconductoring of SDG&E Transmission Lines 698B and 698E) indicates that a total of 5.53 acres will be disturbed as a result of the transmission system upgrades, including 0.12 acres of coastal sage scrub and 0.10 acres to non-native grassland. Work within or near coastal sage scrub could result in impacts to coastal California gnatcatcher and other species associated with this sensitive habitat type. Because some work will take place in the vicinity of drainages and riparian habitat, species such as least Bell's vireo and southwestern willow flycatcher could also be indirectly impacted by nearby construction. Avoidance, minimization, and compensation measures have been proposed to reduce impacts to biological resources to less than significant levels (2008g, Attachment 11). Those measures are not included in this analysis, but will be addressed as part of SDG&E's environmental review process for the transmission system upgrades.

Impacts to Waters of the US/Waters of the State/Riparian Habitat

The gas pipeline alignment crosses six drainages or their tributaries, but the crossings will be accomplished by boring beneath the drainages by means of horizontal directional drilling (OGE 2008a). With establishment of appropriate setbacks for the drilling described in Conditions of Certification **BIO-9** and **BIO-10**, horizontal directional drilling activities are not likely to directly affect state or federal jurisdictional waters. With implementation of Best Management Practices (BMPs), drilling and other surface-disturbing activities are not likely to result in increased sedimentation or other water quality impacts in these drainages. These requirements are discussed in more detail in staff's proposed Conditions of Certification **BIO-6** and **14** and Water and Soil Resources Conditions of Certification **SOIL & WATER-2, 3, 4, and 5**.

Construction of a bridge over Drainage #1, the drainage west of the Site and east of Pala del Norte Road, is proposed to provide site access. Drainage #1 is a broad (approximately 38 feet) ephemeral drainage with three tributaries traversing coastal sage scrub and non-native grassland habitat. This drainage is jurisdictional waters of the State and of the United States, but does not support wetland or riparian vegetation. Direct impacts to jurisdictional waters and to water quality due to bridge construction at Drainage #1 can be avoided with implementation of staff's proposed Conditions of Certification **BIO-6** and **BIO-14**.

Construction activities during the breeding season near riparian habitat along the San Luis Rey River could have significant direct impacts to arroyo toad, least Bell's vireo,

and other sensitive riparian species. The applicant proposed avoiding these impacts by implementing a limited operation period within 300 feet of suitable riparian nesting habitat (OGE 2008s). Staff concurs with these measures, and has included this measure in Conditions of Certification **BIO-7**. These measures require avoidance of all construction activities within 300 feet of riparian habitat from March 1 through September 15 and protection of all riparian habitat. The limited construction window encompasses the breeding/active season for arroyo toads (March 1 through August 31) as well as least Bell's vireo and other bird species inhabiting riparian habitat (March 15 through September 15). As described in staff's proposed Condition of Certification **BIO-12**, a toad exclusion fence shall be installed at the southern border of this road to prevent direct impacts to arroyo toads from vehicular traffic and surface-disturbing activities.

To avoid inadvertent impacts to riparian vegetation, avoid direct construction impacts to arroyo toad, and to reduce the risk of water quality impacts, the applicant has also proposed horizontal directional drilling rather than trenching to install the gas pipeline in the unpaved road through riparian habitat (OGE 2008a). This is the road shown on Figure 3 of the AFC (OGE 2008a) that extends from "East Dairy Farm Area" to "West Dairy Farm Area". Staff concurs with this proposed construction method in this sensitive riparian habitat, and has incorporated this recommendation in staff's proposed Condition of Certification **BIO-7**.

Construction Effects on Water Quality and Aquatic Organisms

Construction activities will occur in close proximity to drainages within the proposed Project Area. All drainages slope to the south so that stormwater runoff from the project site eventually discharges directly to the floodplain of the San Luis Rey River. Construction activities will disturb approximately 36 acres, increasing potential for sedimentation and erosion to the adjacent San Luis Rey River. Increased sedimentation could adversely affect fish, amphibians, and other aquatic organisms in the San Luis Rey River, as could the accidental introduction of washwater, solvents, oil, chemical wastes, cement, or other pollutants from construction equipment and materials. Arroyo toads, a federally listed species, has been recorded breeding immediately downstream of the Project Area, and could be adversely affected by degradation of water quality in the San Luis Rey River.

The applicant has proposed avoiding and minimizing these potential impacts to water quality and aquatic organisms with implementation of an erosion and sedimentation plan (TRC 2008a). CDFG has also proposed Best Management Practices for water quality protection (CDFG 2008). Staff concurs with the applicant's and CDFG's recommendations to protect water quality in the San Luis Rey River, and has also included a construction setback from drainages for horizontal directional drilling activities. The Best Management Practices and other measures contained in staff's proposed conditions **BIO-6, 7, 9, and 14** incorporate these recommendations, and their implementation will avoid impacts to water quality and aquatic biota.

Introduction of Predators/Nest Parasites

The presence of a construction crew, either by bringing dogs to the work site that could prey on wildlife or by bringing food items that might attract predators (coyotes, ravens,

raccoons), could indirectly affect sensitive species. Human food sources can also attract brown-headed cowbirds, nest parasites that can reduce nest success of least Bell's vireos, southwestern willow flycatchers, and other birds nesting the San Luis Rey River riparian habitat. Staff recommends implementation of the Best Management Practices described in Condition of Certification **BIO-6**, which includes guidelines for construction personnel to keep food-related trash in sealed containers and keep pets at home, to avoid these potential impacts.

Construction Impacts - Noise

Project construction is expected to begin in April 2009 and last for six months; construction activities will therefore overlap with the peak nesting season for birds breeding near the site and linear facilities. Construction noise can adversely affect nesting activities because birds communicate primarily through vocalizations and auditory cues, and therefore increased noise levels can interfere with normal communication. Background noise can interfere with maintenance of contact between mated birds, warning and distress calls that signify predators and other threats, and feeding behavior and protection of the young. In addition, high noise levels may discourage birds from nesting in areas that are otherwise suitable.

To prevent disturbance to nesting birds, no construction activities will occur between February 15 through August 31 within 500 feet of coastal sage scrub habitat, or between March 15 through September 15 within 300 feet of riparian habitat (Condition of Certification **BIO-7**). If such avoidance is not feasible, then pre-construction nest surveys will be conducted in all potential nesting habitat within 500 feet of the project area boundaries. If coastal California gnatcatchers are found nesting within 500 feet of proposed construction activities, or if least Bell's vireo or southwestern willow flycatchers are found nesting within 300 feet, such construction shall be postponed until a qualified biologist verifies that nesting is complete. Measures to protect special status species nesting in the OGP area are described in more detail in staff's proposed Conditions of Certification **BIO-7** and **8**.

OPERATIONS IMPACTS

Operational Noise

The OGE site is adjacent to SR 76, a busy roadway that generates ambient daytime noise. Noise from operation of the OGP will be more prominent at night. The Project design and implementation shall include noise reduction and noise control design features to the extent feasible ensure that operation of the Project will not exceed the effective noise standards of San Diego County code while accounting for ambient noise conditions from the adjacent SR 76. Noise increases due to the Project will be less than 5 dB at all of the surrounding areas with respect to the late-night residual noise; as described in the Noise section, project noise control design features (primarily sound walls) will reduce the plant noise additions to the very low ambient conditions such that

late-night standards can be met. Based on this analysis, staff has concluded that operational noise from the OGP will have no significant impacts to special status wildlife and other species in the vicinity of the site.

Criteria Pollutants and Toxic Air Pollutants

Operation of the OGP would result in emissions of criteria pollutants and toxic air pollutants, primarily particulate matter, carbon monoxide (CO), oxides of sulfur (SO_x), nitrogen oxides (NO_x), and precursor organic compounds (POC). Elevated levels of CO, SO_x, NO_x, and particulate matter have the potential to adversely impact biological resources. The periods during which wildlife and plant communities would be exposed to toxic air pollutant emissions from the OGP would be relatively limited because J Power expects to operate this facility primarily as a peaker unit (OGE 2008a). To minimize air pollutant emissions, the project would employ best-available control technology and would comply with air quality standards that are designed to protect human health, vegetation, and wildlife (OGE 2008a). An analysis of toxic air pollutants indicates that the facility impacts will not result in violations of existing air quality standards, nor cause an exacerbation of existing violations (OGE 2008a). Staff analyzed the potential for direct impacts of CO, SO_x, NO_x, and airborne particulates on vegetation and determined that the emission levels of these pollutants from the OGP are not likely to have significant impacts to special status plants, animals, or other biological resources in the San Luis Rey River or coastal sage scrub habitat.

Impacts of Lighting on Wildlife

Lighting at the OGP could adversely affect wildlife, including special status species in the San Luis Rey River, by disrupting normal foraging and nesting activities. Lights can also attract nocturnal migrants to tall structures such as exhaust stacks, putting them at risk of collision. To minimize the potential for adverse effects to wildlife resulting from lighting at the OGP, staff recommends the proposed Condition of Certification **VIS-3** be implemented. Suggested measures call for lighting to be restricted to areas required for safety, security, and operation; exterior lights will be hooded and directed on site. With implementation of this condition of certification, staff concludes that OGP lighting will have no significant impacts to nearby sensitive wildlife and their habitat.

Bird Collisions with OGP Structures

Bird fatalities due to collisions with man-made structures such as lighthouses, smokestacks, communication towers, windows, buildings, and power lines have been well-documented in the avian literature (Kerlinger 2000, Erickson et al. 2001). The two 80-foot-tall exhaust stacks to be constructed at the OGP site could potentially pose a collision risk to birds, including special status species inhabiting the surrounding coastal sage scrub habitat and the San Luis Rey River. The potential for collision with the exhaust stacks is considered less than significant, however, because site offers no topographic or habitat features that would draw nocturnal migrants or funnel them in a north-south direction through the project area.

Introduction of Non-Native Plant Species

When construction is complete at the OGP site, the perimeter will be planted with trees and shrubs as a visual screen in accordance with staff's proposed Condition of

Certification **VIS-2**. Inappropriate landscaping choices could harm plant communities if non-native, invasive species are included in the plant palette for the landscaping plan. In addition, runoff from irrigation of trees and shrubs with high water needs, or planting species that require intensive fertilizers or pesticides, could adversely affect water quality in the San Luis Rey River. To avoid these potential impacts, staff recommends that the landscaping plans do not include exotic, invasive plant species or those that require intensive irrigation or fertilizing. Staff supports this recommendation and provides additional information on CDFG's planting recommendations, including avoidance of exotic species in the landscaping plan, in staff's Condition of Certification **VIS-2**.

CUMULATIVE IMPACTS

Cumulative impacts refer to a proposed project's incremental effect viewed over time, together with other closely related past, present, and reasonably foreseeable future projects (Public Resources Code § 21083; California Code of Regulations, Title 14, §§ 15064[h], 15065[c], 15130, and 15355). Cumulative impacts can occur when individually minor but collectively significant projects take place over time.

Direct, indirect, and cumulative impacts to sensitive species and the loss of habitat are critical issues in the San Diego County region, an area supporting an extraordinarily high number of sensitive species. Consequently, state, federal, and local agencies have developed regional and subregional strategies to help minimize sensitive species impacts. Compliance with the North Area Multiple Species Conservation Program (NAMSCP) is the primary means of conserving San Diego County's sensitive biological resources and special status species and minimizing direct, indirect, and cumulative impacts of future development of both public and private lands within the NAMSCP area. Staff concludes that with implementation of mitigation measures and compliance with staff's conditions of certification, all of which are consistent with the NAMSCP, the OGP will not result in cumulative impacts to special status species or other sensitive biological resources.

COMPLIANCE WITH LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

The proposed project must comply with state, federal, and county laws, ordinances, regulations, and standards that address state and federally listed species, as well as other sensitive species, and their habitats. In San Diego County, the Multiple Species Conservation Program Subregional Plans provide guidance for protection of sensitive wildlife and plant communities within the San Diego region.

San Diego County has developed the draft North Area Multiple Species Conservation Program (MSCP) as a practical, science-based conservation approach to protect and contribute to the recovery of sensitive species within the northern Planning Area³. The MSCP addresses the high biological diversity in the county and its rapid urban growth.

³ The Planning Area for the NCMSCP encompasses 311,890 acres in and around the unincorporated communities of Bonsall, De Luz, Fallbrook, Harmony Grove, Rancho Santa Fe, Lilac, Pala, Pauma Valley, Rainbow, Ramona, Rincon Springs, Twin Oaks Valley, and Valley Center.

This Plan serves as a multiple species Habitat Conservation Plan (HCP) pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act (ESA), as well as a Natural Community Conservation Plan (NCCP) under the California NCCP Act.

The County of San Diego incorporates the habitat and sensitive species protection measures through their Habitat Loss Permit (HLP). An approved HLP is required before the San Diego County Department of Public Works can issue a grading permit if coastal sage scrub habitat will be impacted by the grading, pursuant to Section 86.104 of County of San Diego Ordinance No. 8365 (N.S.) and Section 4.2.g of the CSS NCCP Process Guidelines (CDFG, November 1993). A HLP application is currently under review by the San Diego Public Works Department. The draft findings of the HLP, which may be revised upon review by CDFG and USFWS, are as follows:

Finding 1.a: The habitat loss does not exceed the 5% guideline.

Approved coastal sage scrub losses for the entire unincorporated County, outside the boundaries of the Multiple Species Conservation Program (MSCP), will not exceed the 5% guidelines, as presented in the following table:

Unincorporated Areas – Coastal Sage Scrub Cumulative Loss	
Total loss allowed under 5% guideline:	2953.30 acres
Cumulative loss of coastal sage scrub to date:	1359.92 acres
Net loss due to this project:	9.32 acres
Total cumulative loss:	1369.24 acres
Remaining loss under 5% guideline:	1584.06 acres

Finding 1.b: The habitat loss will not preclude connectivity between areas of high habitat values.

Extensive tracts of coastal sage scrub habitat rated as “very high” and “high” by the North County Subarea Plan Habitat Evaluation Model occur immediately north of the Orange Grove Energy project site and its linear facilities, and the project area is within the NCMSCP Pre-approved Mitigation Area. However, the 8.5-acre power plant site is located in an abandoned lemon orchard on a 41-acre parcel zoned General Agriculture. The 2.4 mile gas pipeline will be constructed on mostly disturbed lands zoned for General Agriculture, Limited Agriculture, and Solid Waste Facility. The proposed project and its linear facilities are immediately adjacent to SR 76, an existing barrier to wildlife movement and habitat connectivity. The habitat within the proposed project site and linear facilities are already highly disturbed by past agricultural operations, and are subject to ongoing disturbance by SR 76. The only intact and undisturbed coastal sage scrub habitat that will be directly affected by the project is an approximately 400-foot portion of the alignment immediately west of the Pala Substation. Upon completion of pipeline installation this disturbed area will be allowed to revegetate, and therefore will not create a substantial break in the continuity of coastal sage scrub vegetation. The proposed project, therefore, will not preclude connectivity between areas of high habitat value.

Finding 1.c: The habitat loss will not preclude or prevent the preparation of the subregional NCCP.

Construction of the Orange Grove Energy power plant and ancillary facilities would not preclude or prevent preparation of a subregional NCCP because the proposed impacts do not affect large populations of target resources and the development would not preclude connectivity, as described above. Avoidance, minimization, and compensatory mitigation measures described in the conditions of certification would avoid, minimize, or offset impacts to coastal sage scrub plant communities and the wildlife species dependent on this habitat.

Finding 1.d: The habitat loss has been minimized and mitigated to the maximum extent practicable in accordance with Section 4.3 of the NCCP Process Guidelines.

To minimize impacts to coastal sage scrub, the alignment of the gas pipeline was placed within disturbed areas as much as possible, mostly in existing unpaved roads or areas disturbed by agricultural operations. Placing the entire length of the gas pipeline within the SR 76 right-of-way would have avoided all impacts to coastal sage scrub habitat, but California Department of Transportation policy precludes a private entity such as Orange Grove J-Power from using state right-of-way (Markey 2008).

Avoidance and compensation measures described in the conditions of certification will offset the cumulative loss of coastal sage scrub, and will avoid direct and indirect impacts to special-status species inhabiting native habitats at the project site. The project-related loss of coastal sage scrub and impacts to special status species inhabiting this habitat type has therefore been minimized to the extent practicable.

Finding 2: The habitat loss will not appreciably reduce the likelihood of survival and recovery of listed species in the wild.

Four listed species (coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, and arroyo toad) have high potential to occur near the proposed gas pipeline alignment for the project (OGE 2008a). With implementation of staff's proposed conditions of certification, the project will not reduce the likelihood of survival and recovery of these listed species.

Finding 3: The habitat loss is incidental to otherwise lawful activities.

The project will require grading plans for development of the power plant site and ancillary facilities. Prior to clearing any coastal sage scrub or non-native grassland concurrence with findings from this Habitat Loss Permit will be required from the Department of Fish and Game and U.S. Fish and Wildlife Service, as well as approval by the County of San Diego for a Grading Permit. The project will also require a Streambed Alteration Agreement from the California Department of Fish and Game, and the project owner has already been notified that application is complete and will be issued by November 12, 2008 (notification of Lake or Streambed Alteration Agreement No. 1600-2008-0286-R5 Orange Grove Project [DFG 2008a]). No state or federal permits other than those noted above have been identified as being required. Construction and/or land use modification will not commence until all appropriate permits are secured. The project has been found to be in conformance with

Section 86.104 of the San Diego County Code. As such, the anticipated loss will be incidental to “otherwise lawful activities”.

In addition to integrating the County of San Diego’s HLP conditions into this analysis, staff has communicated with personnel from the CDFG and USFWS regarding recommended measures to protect sensitive biological resources and has incorporated those recommendations into conditions of certification. No Clean Water Act (CWA) section 404 permits are required from the U.S. Army Corps of Engineers (OGE 2008d), therefore, no CWA section 401 water quality certification will be required. In addition, the San Diego Regional Water Quality Control Board confirmed that Waste Discharge Requirements would not be required for drilling beneath drainages (CEC 2008q). The construction and operation of the project would therefore be in compliance with all federal, state, and local LORS related to biological resources if staff’s conditions of certification are adopted and implemented.

CONCLUSIONS

Construction of the OGP will result in temporary and permanent losses of 9.3 acres of coastal sage scrub and 3.4 acres of non-native grassland, which contributes to the significant cumulative loss of these habitat types in the northern San Diego region. Construction activities within or near coastal sage scrub habitat and riparian forest along the San Luis Rey River could directly or indirectly impact eleven species of special-status plants and animals, including some listed as threatened or endangered under state and federal endangered species acts. To compensate for these losses, avoid take of listed species, and to achieve consistency with the draft North County Multiple Species Conservation Program, the applicant must implement impact avoidance, minimization, and compensation measures described in staff’s conditions of certification. These conditions include specific measures to protect sensitive species and habitats, and general conditions to ensure implementation of a worker training program, presence of a qualified biologist to monitor construction, and development of a detailed mitigation and monitoring program (Conditions of Certification **BIO-1** through **BIO-5**).

Additional permits needed to address biological resource impacts of the project include a Streambed Alteration Agreement from CDFG, and a Habitat Loss Permit from the San Diego County of Public Works. No waters of the United States will be impacted; therefore no permits are needed from the U.S. Army Corps of Engineers. With implementation of staff’s conditions of certification, take of endangered and threatened species would be avoided, and the construction and operation of the project would comply with all federal, state, and local laws, ordinances, regulations, and standards relating to biological resources. Staff recommends adoption of the proposed biological resources conditions of certification to mitigate potential impacts to biological resources to less than significant levels.

CONDITIONS OF CERTIFICATION

The following Biological Resources conditions of certification are proposed by staff.

DESIGNATED BIOLOGIST SELECTION

BIO-1 The project owner shall submit the resume, including contact information, of the proposed Designated Biologist to the Compliance Project Manager (CPM) for approval. The Designated Biologist must meet the following minimum qualifications:

1. A Bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field;
2. At least three years of experience in field biology or current certification of a nationally recognized biological society, such as The Ecological Society of America or The Wildlife Society;
3. At least one year of field experience with biological resources found in or near the project area; and
4. An ability to demonstrate to the satisfaction of the CPM the appropriate education and experience for the biological resources tasks that must be addressed during project construction and operation.

Verification:

1. The project owner shall submit the specified information at least 60 days before the start of any site (or related facilities) mobilization. Site and related facility activities shall not begin until an approved designated biologist is available on site.
2. If the CPM considers the proposed Designated Biologist unacceptable, the project owner shall submit another individual's name and qualifications for consideration. If the approved Designated Biologist needs to be replaced, the project owner shall obtain approval of a new Designated Biologist by submitting to the CPM the name, qualifications, address, and telephone number of the proposed replacement. No disturbance will be allowed in any designated sensitive areas until the CPM approves a new Designated Biologist and the new biologist is on site.

DESIGNATED BIOLOGIST DUTIES

BIO-2 The CPM-approved Designated Biologist shall perform the following during project construction and operation:

1. Advise the project owner's Construction Manager on the implementation of the Biological Resource conditions of certification;
2. Supervise or conduct mitigation, monitoring, and other biological resources compliance efforts, particularly in areas requiring avoidance or containing sensitive biological resources, such as special status species nesting areas; and

3. Notify the project owner and the CPM of non-compliance with any Biological Resources condition of certification.

Verification: During project construction, the Designated Biologist shall maintain written records of the tasks described above, and summaries of these records shall be submitted along with the Monthly Compliance Reports to the CPM. During project operation, the Designated Biologist shall submit record summaries in the Annual Compliance Report.

DESIGNATED BIOLOGIST AUTHORITY

BIO-3 The project owner's Construction Manager shall act on the advice of the Designated Biologist to ensure conformance with all Biological Resources conditions of certification. The project owner's Construction Manager shall halt, if necessary, all construction activities in areas specifically identified by the Designated Biologist as sensitive to assure that potential significant biological resource impacts are avoided. The Designated Biologist shall:

1. Inform the project owner and the Construction Manager when to resume construction, and
2. Advise the project owner and the CPM if any corrective actions are needed or have been instituted.

Verification: Within two (2) working days of a Designated Biologist notification of non-compliance with a Biological Resources condition of certification or a halt of construction, the project owner shall notify the CPM by telephone of the circumstances and actions being taken to resolve the problem or the non-compliance with a condition. For any necessary corrective action taken by the project owner, a determination of success or failure will be made by the CPM within five (5) working days after receipt of notice that corrective action is completed, or the project owner will be notified by the CPM that coordination with other agencies will require additional time before a determination can be made.

WORKER ENVIRONMENTAL AWARENESS PROGRAM

BIO-4 The project owner shall develop and implement a CPM-approved Worker Environmental Awareness Program in which each of its employees, as well as employees of contractors and subcontractors who work on the project site or related facilities during construction and operation are informed about the sensitive biological resources associated with the project area. The Worker Environmental Awareness Program must:

1. Be developed by the Designated Biologist and consist of an on-site or training center presentation or video presentation in which supporting written material is made available to all participants;
2. Discuss the locations and types of sensitive biological resources in coastal sage scrub and riparian habitat along the San Luis Rey River, the meaning of various temporary and permanent habitat protection measures, Best Management Practices described in BIO 6, and the reasons for protecting these resources; and

3. Identify whom to contact if there are further comments and questions about the material discussed in the program.

The specific program can be administered by a competent individual(s) acceptable to the Designated Biologist. Each participant in the on-site Worker Environmental Awareness Program shall sign a statement declaring that the individual understands and shall abide by the guidelines set forth in the program materials. The person administering the program shall also sign each statement.

Verification: At least sixty (60) days prior to the start of any project-related ground disturbance activities, the project owner shall provide copies of the Worker Environmental Awareness Program and all supporting written materials prepared by the Designated Biologist and the name and qualifications of the person(s) administering the program to the CPM for approval. The project owner shall state in the Monthly Compliance Report the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date. The signed statements for the construction phase shall be kept on file by the project owner and made available for examination by the CPM for a period of at least six (6) months after the start of commercial operation. During project operation, signed statements for active project operational personnel shall be kept on file for the duration of their employment and for six (6) months after their termination.

BIOLOGICAL RESOURCES MITIGATION IMPLEMENTATION AND MONITORING PLAN

BIO-5 The project owner shall submit to the CPM for review and approval a copy of the final Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) and shall implement the measures identified in the plan. Any changes made to the adopted BRMIMP must be made in consultation with the Energy Commission as well as with the USFWS and CDFG. The final BRMIMP shall identify:

1. All biological resources mitigation, monitoring, and compliance conditions included in the Energy Commission's Final Decision;
2. All sensitive biological resources to be impacted, avoided, or mitigated by project construction, operation, and closure;
3. All relevant mitigation measures provided in the draft North County Multiple Species Conservation Program Plan;
4. All required mitigation measures/avoidance strategies for each sensitive biological resource, including pre-construction flagging of non-disturbance areas to protect Parry's tetracoccus, drainages, riparian habitat of the San Luis Rey River, and coastal sage scrub;
5. All locations, on a map of suitable scale, of laydown areas and areas requiring temporary protection and avoidance during construction, including drainages, riparian habitat of the San Luis Rey River, and coastal sage scrub;

6. Duration for each type of monitoring and a description of monitoring methodologies and frequency;
7. Performance standards to be used to help decide if/when proposed mitigation is or is not successful;
8. All performance standards and remedial measures to be implemented if performance standards are not met;
9. A discussion of biological resource-related facility closure measures; and
10. A process for proposing plan modifications to the CPM and appropriate agencies for review and approval.

Verification: At least sixty (60) days prior to start of any project-related ground disturbance activities, the project owner shall provide the CPM with the final version of the BRMIMP, and the CPM will determine the plan's acceptability within 15 days of receipt of the final plan. All modifications to the approved BRMIMP must be made only after consultation with San Diego County, Energy Commission, USFWS, and CDFG. The project owner shall notify the CPM five (5) working days before implementing any CPM-approved modifications to the BRMIMP.

Within 30 days after completion of project construction, the project owner shall provide to the CPM for review and approval, a written report identifying which items of the BRMIMP have been completed, a summary of all modifications to mitigation measures made during the project's construction phase, and which mitigation and monitoring plan items are still outstanding.

BEST MANAGEMENT PRACTICES

- BIO-6** Construction workers should implement Best Management Practices during all construction activities to avoid impacts to protected species and their habitat during construction. Employees working on the OGP shall:
1. Confine their activities and storage of vehicles, equipment, and construction materials to the fenced project footprint;
 2. Enclose all food related trash items in sealed containers and remove them regularly from the project site to avoid attracting predators of sensitive wildlife;
 3. Refrain from bringing dogs or other pets to the project site;
 4. Avoid disposal or temporary placement of excess fill, brush, or other debris within drainages and riparian habitat;
 5. Install escape ramps within open trenches and bore pits to provide egress for animals that may fall into these cavities and become trapped;
 6. Minimize ingress and egress of construction equipment and personnel to riparian habitat along the San Luis Rey River;

7. Conduct all equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities within the fenced project limits. Areas for equipment maintenance should be designated only in previously compacted and disturbed sites and shown on construction plans;
8. Check equipment for leaks prior to operation and repair as necessary.

Verification: All Best Management Practices and their implementation methods shall be included in the BRMIMP. Implementation of the measures will be described in the Monthly Compliance Reports and provided to the CPM. Within thirty (30) days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction termination report identifying how BMPs have been completed.

LIMITED CONSTRUCTION PERIODS/CONSTRUCTION METHODS

BIO-7 To prevent direct impacts to sensitive species inhabiting coastal sage scrub and riparian habitat along the San Luis Rey River, the following measures shall be implemented in riparian and coastal sage scrub habitat areas:

1. To avoid impacts to arroyo toad, least Bell's vireo, and other sensitive species inhabiting the riparian habitat on the San Luis Rey River, no construction activities should occur within 300 feet of riparian habitat from March 1 through September 15. This limited construction window encompasses the breeding/active season for arroyo toads (March 1 through August 31) and least Bell's vireo and other bird species inhabiting riparian habitat (March 15 through September 15);
2. To avoid impacts to riparian vegetation and reduce the risk of water quality impacts, horizontal directional drilling shall be used rather than trenching to install the gas pipeline in the unpaved road through riparian habitat (the road shown on Figure 3 of the AFC (OGE 2008a) that extends from "East Dairy Farm Area" to "West Dairy Farm Area");
3. To avoid impacts to coastal California gnatcatcher and other sensitive birds nesting in coastal sage scrub, no vegetation removal or surface-disturbing activities shall occur within 500 feet of coastal sage scrub from February 15 through August 31. The County of San Diego Director of Public Works and CPM may waive this condition, through written concurrence from the Designated Biologist, USFWS, and CDFG, if no nests are present in the vicinity of the brushing, clearing, or grading (see Condition of Certification **BIO-8**);
4. The Designated Biologist shall be present for all initial clearing and grubbing activities within coastal sage scrub to ensure compliance with all Conditions of Certification.

Verification: The limited construction periods and methods described above shall be included in the BRMIMP. Implementation of the measures will be described in the Monthly Compliance Reports and provided to the CPM. Within thirty (30) days after completion of project construction, the project owner shall provide to the CPM, for

review and approval, a written construction termination report identifying how limited construction periods and methods have been completed.

PRE-CONSTRUCTION NEST SURVEYS

BIO-8 Pre-construction nest surveys shall be conducted if construction activities will occur within 500 feet of Diegan coastal sage scrub habitat from February 15 through August 31, or within 300 feet of riparian habitat from March 15 through September 15. The Designated Biologist shall perform surveys in accordance with the following guidelines:

1. Surveys shall cover all potential nesting habitat within 500 feet of the boundaries of the OGP site and linear facilities;
2. At least two pre-construction surveys shall be conducted, separated by a minimum 10-day interval. One of the surveys needs to be conducted within the 14-day period preceding initiation of construction activity. Additional follow-up surveys may be required if periods of construction inactivity exceed three weeks, an interval during which birds may establish a nesting territory and initiate egg laying and incubation;
3. If active nests of non-listed species are detected during the survey, a buffer zone (protected area surrounding the nest, the size of which is to be determined by the Designated Biologist in consultation with CDFG) and monitoring plan shall be developed. Nest locations shall be mapped and submitted, along with a report stating the survey results, to the CPM;
4. The Designated Biologist shall monitor the nest until he or she determines that nestlings have fledged and dispersed; activities that might, in the opinion of the Designated Biologist, disturb nesting activities, shall be prohibited within the buffer zone until such a determination is made; and
5. If active nests of least Bell's vireo or southwestern willow flycatcher are detected within 300 feet of proposed construction, or if active nests of coastal California gnatcatcher are detected within 500 feet, such construction shall cease until the Designated Biologist determines that the nestlings have fledged and dispersed, and

Verification: At least ten (10) days prior to the start of any project-related ground disturbance activities, the project owner shall provide the CPM a letter-report describing the findings of the pre-construction nest surveys, including the time, date, and duration of the survey; identity and qualifications of the surveyor (s); and a list of species observed. If active nests are detected during the survey, the report shall include a map or aerial photo identifying the location of the nest and shall depict the boundaries of the no-disturbance buffer zone around the nest.

ENVIRONMENTALLY SENSITIVE AREAS

BIO-9 At least two weeks prior to construction activities and vegetation clearing, including clearing within fuel modification zones, the Designated Biologist shall identify and flag biologically sensitive areas that are to be protected as Environmentally Sensitive Areas (ESAs) during construction. Orange

construction fencing shall be installed around these flagged ESAs wherever work is proposed within 50 feet of these sensitive features. Vegetation clearing and surface-disturbing activities shall not begin until the ESAs are delineated on the ground with the fencing, and the fencing shall remain in place for the duration of construction. No vehicles, heavy equipment, vegetation removal, storage of material, or surface disturbing activities or other construction shall be permitted within the ESAs. The ESA's shall be established as follows:

1. Around the drip line of all Parry's tetracoccus shrubs located within 50 feet of proposed fuel reduction activities, including Pala del Norte Road and around the site;
2. At the coastal sage scrub habitat bordering the proposed gas pipeline alignment (Segments A and B, Figure 3, Appendix 6.5-B, OGE 2008a). All coastal sage scrub habitat beyond the designated gas pipeline work area shall be fenced in this area;
3. Within coastal sage scrub habitat along Pala del Norte Road and around the power plant site, ESA fencings shall be established to limit fuel reduction zones to a 100-foot clearance around structures and 30-foot clearance from the road; and
4. At all riparian habitat within 50 feet of proposed laydown and staging areas, bore pit excavations, spoils piles, and any other areas subject to construction traffic, vegetation removal, or surface disturbing activities. This includes riparian habitat along the San Luis Rey River on both sides of the dirt road between East Dairy Farm Area and West Dairy Farm (depicted in Figure 3, OGE 2008a).

For horizontal directional drilling and other construction activities near drainages, ESAs shall be established as follows:

1. At all ephemeral drainages where bore pit excavations are dug into a soil or rock surface, the bore pit excavations shall be located at least 20 feet from boundary of jurisdictional waters of the State. The CDFG may establish a greater setback at certain drainages if site conditions warrant, which will be described in the Streambed Alteration Agreement that will be issued for this project. A lesser setback may be approved by the Designated Biologist and CDFG if it can be demonstrated that the bore pit will be excavated in competent ground with no material risk of caving that could disturb jurisdictional waters, and that other appropriate precautions are also in place to prevent surface disturbance to the drainage and to downstream water quality.
2. Where bore pit excavations are dug into Pala del Norte Road, the bore pit excavations shall be located either at least 20 feet from jurisdictional waters or three feet inside the edge of pavement.

3. Where grading or excavation work for the access road bridge over Drainage #1 occurs within 20 feet of jurisdictional waters of the State, grading and excavation work shall be monitored full-time to assure that there is no surface disturbance to jurisdictional waters or impacts to downstream water quality. The CDFG may establish additional conditions to protect waters of the state and water quality, which will be described in the Streambed Alteration Agreement that will be issued for this project.

Verification: At least 10 days prior to the start any project-related ground disturbance activities, the project owner shall provide written and photographic verification to the CPM that ESA fencing has been established at the sensitive biological resources described above.

HABITAT LOSS PERMIT

BIO-10 Prior to approval of grading or improvement plans the project owner shall provide evidence to the satisfaction of the San Diego County Director of Public Works and the CPM that 18.6 acres of Diegan coastal sage scrub, and 6.8 acres of non-native annual grassland, has been secured in a mitigation bank approved by the California Department of Fish & Game and the U.S. Fish and Wildlife Service. Evidence of purchase shall include the following information, to be provided by the project owner and mitigation bank:

1. A copy of the purchase contract referencing the project name and numbers for which the habitat credits were purchased.
2. If not stated explicitly in the purchase contract, a separate letter must be provided identifying the entity responsible for the long-term management and monitoring of the preserved land.
3. To ensure the land will be protected in perpetuity, evidence must be provided that a dedicated conservation easement or similar land constraint has been placed over the mitigation land.
4. An accounting of the status of the mitigation bank. This shall include the total amount of credits available at the bank, the amount required by this project, and the amount remaining after utilization by this project.

The project owner shall also provide evidence to the CPM that the Habitat Loss Permit includes the following Conditions of Approval:

1. Grading and plans shall include the following information for all activities within coastal sage scrub habitat: "Restrict all brushing, clearing and/or grading such that none will be allowed during the avian breeding season (February 15 through August 31). The Director of Public Works and CPM may waive this condition, through written concurrence from the US Fish and Wildlife Service and the California Department of Fish and Game, that no nests are present in the vicinity of the brushing, clearing or grading."
2. Within coastal sage scrub habitat fuel reduction zones shall be limited to a 100-foot clearance around structures and 30-foot clearance around roads

in the vicinity of native habitats such as coastal sage scrub. The Designated Biologist shall flag the limits of fuel reduction clearing within coastal sage scrub habitat prior to initiating vegetation clearing activities.

Verification: At least 30 days prior to start of any project-related ground disturbance activities, the project owner shall provide evidence to the CPM that 18.6 acres of Diegan coastal sage scrub, and 6.8 acres of non-native annual grassland has been secured in a mitigation bank approved by the California Department of Fish & Game and the U.S. Fish and Wildlife Service, and that other Conditions of Approval described in the Habitat Loss Permit have been incorporated into the BRMIMP and implemented.

PARRY'S TETRACOCCLUS MITIGATION PLAN

BIO-11 The project owner shall implement the Parry's tetracoccus mitigation plan described in OGE 2008g (Attachment 4 - Revised Exhibit 39-1, Response to Data Requests at September 11, 2008 Workshop (*Parry's Tetracoccus Conceptual Mitigation Plan, Orange Grove Project, San Diego County, California. August 2008, revised September 2008. Prepared for Orange Grove Energy, L.P. by TRC, Irvine, CA*)). The basic components of this mitigation plan include establishment of a 0.09-acre mitigation area in the northern corner of the 8.5 project site; collection of seeds/cuttings from Parry's tetracoccus at the project site in the fall prior to construction, site preparation; and planting of at least 26 Parry's tetracoccus plants propagated from the local plant material. The mitigation plan calls for five years of monitoring/maintenance, and protection of the mitigation site for the life of the project:

Verification: At least 60 days prior to the start of any project-related ground disturbance activities, the project owner shall provide written and photographic evidence to the CPM that Parry's tetracoccus seeds or cuttings have been collected and that these plant materials are being propagated at a qualified nursery. No later than December 31st of the year during which construction begins, the project owner shall provide written and photographic documentation that plantings have occurred as described in the Parry's tetracoccus mitigation plan. The Designated Biologist shall maintain written records of the tasks described above, and summaries of these records shall be submitted along with the Monthly Compliance Reports to the CPM. During project operation, the Designated Biologist shall submit record summaries in the Annual Compliance Report for a period until performance criteria described in the mitigation plan have been achieved (five years or more).

ARROYO TOAD EXCLUSION FENCING

BIO-12 If construction activities or construction-related vehicular traffic will occur within riparian habitat between March 1 and September 15, a toad exclusion fence shall be installed to prevent arroyo toad access to areas subject to traffic and construction activities. This fence shall be installed on the southwest side of the dirt road located between "East Dairy Farm Area" and "West Dairy Farm Area" (depicted in Figure 3, OGE 2008a). Fencing shall consist of woven nylon netting approximately three feet in height attached to wooden stakes. Prior to installing the fencing, a narrow trench approximately 3-6 inches in depth would be excavated and the fence buried, to prevent

burrowing beneath the fence. Toad exclusionary fencing shall be checked daily by the Designated Biologist before and after each day's construction activities for damage and all necessary repairs should be made immediately. All fencing shall be removed following completion of all project related activities.

Verification: At least 30 days prior to the initiation of any project-related ground disturbance activities south of SR 76, the project owner shall submit written and photographic verification that the toad exclusion fencing has been installed. Implementation of the arroyo toad exclusion fencing measures will be monitored by the Designated Biologist and described in the Monthly Compliance Reports and provided to the CPM. Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction termination report identifying how arroyo toad avoidance measures have been completed.

IMPACTS TO GREGORY CANYON MITIGATION LANDS

BIO-13 The project owner shall secure habitat compensation credits for 4.4 acres of oak woodland in a mitigation bank approved by the California Department of Fish & Game, the U.S. Fish and Wildlife Service, and the County of San Diego to compensate for impacts to future Gregory Canyon Landfill mitigation lands, and shall provide written verification that this proposed compensatory mitigation is satisfactory to CDFG and USFWS. Evidence of purchase shall include the following information, to be provided by the mitigation bank:

1. A copy of the purchase contract referencing the project name and numbers for which the habitat credits were purchased.
2. If not stated explicitly in the purchase contract, a separate letter must be provided identifying the entity responsible for the long-term management and monitoring of the preserved land.
3. To ensure the land will be protected in perpetuity, evidence must be provided that a dedicated conservation easement or similar land constraint has been placed over the mitigation land.
4. An accounting of the status of the mitigation bank. This shall include the total amount of credits available at the bank, the amount required by this project and the amount remaining after utilization by this project.

Verification: At least 60 days prior to the initiation of construction activities within gas pipeline Segments C and D (Figure 3, Appendix 6.5-B, OGE 2008a), the project owner shall submit written verification that habitat compensation credits for 4.4 acres of oak woodland have been secured in a mitigation bank approved by the CDFG and USFWS to compensate for impacts to future Gregory Canyon Landfill mitigation lands. The project owner shall also provide written verification that this proposed compensatory mitigation is satisfactory to CDFG and USFWS.

STREAMBED ALTERATION AGREEMENT

BIO-14 The project owner shall implement all terms and conditions described in the Streambed Alteration Agreement that will be issued for this project

(Notification of Lake or Streambed Alteration Agreement No. 1600-2008-0286-R5), and shall incorporate these measures within the BRMIMP.

Verification: All terms and conditions described in the CDFG Streambed Alteration Agreement shall be included in the BRMIMP. Implementation of these terms and conditions will be described in the Monthly Compliance Reports and provided to the CPM. Within thirty 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction termination report describing how Streambed Alteration Agreement conditions have been satisfied.

REFERENCES

CDFG 2008. Special Animals. California Department of Fish and Game, Biogeographic Data Branch California Natural Diversity Database. February 2008.

CDFG. Southern California Coastal Sage Scrub NCCP Conservation Guidelines, Published by: California Department of Fish & Game and California Resources Agency Sacramento, CA 95814: Attachment C. Evaluation Logic Flow Chart. August 1993.

CEC 2008q. CEC/C. Closson (tn48705) Report of Conversation dated 10/3/08 with C. Closson/M. Porter to permits for horizontal directional drilling. Submitted to Dockets 10/22/08.

DFG 2008a – E. Pert to F. Miller (tn48020) DFG comments on AFC dated 9/17/08. Submitted to Dockets 9/18/08.

DFG 2008b – T. Spear to S. Thome. Notification of Streambed Alteration No. 1600-2008-0286-R5 Orange Grove Project. 9/12/08.

California Native Plant Society. 2007. Inventory of Rare and Endangered Plants of California (on-line 7th edition). California Native Plant Society. Sacramento, CA.

Erickson, W. P., G. D. Johnson, M. D. Strickland, K. J. Sernka, and R. E. Good. 2001. Avian collisions with wind turbines: A summary of existing studies and comparisons to other sources of avian collision mortality in the United States. Western EcoSystems Technology, Inc., Cheyenne, Wyo.

Kerlinger, Paul. 2000. Avian Mortality at Communication Towers: A Review of the Recent Literature, Research; and Methodology. Prepared for U.S. Fish and Wildlife Service, Office of Migratory Bird Management.

Back, E. 2008. Principal, TRC. E-mail and telephone communications with Susan Sanders, California Energy Commission, October 17, 2008.

County of San Diego Department of Public Health 2007. Revised Final Environmental Impact Report and Technical Appendices A through D. State clearinghouse No. 1995061007. March 2007.

County of San Diego 2001. Habitat Evaluation Model. County of San Diego Multiple Species Conservation Program. Prepared for County of San Diego Department of Planning and Land Use. Prepared by AMEC Earth and Environmental, Inc., Contributions by Conservation Biology Institute. May 2001.

County of San Diego 2001a. Proposed Gap Analysis Approach and Preliminary Results. County of San Diego Multiple Species Conservation Program. Prepared for County of San Diego Department of Planning and Land Use. Prepared by AMEC Earth and Environmental, Inc. Contributions by Conservation Biology Institute May 2001.

Markey, J. 2008. District Permit Engineer, Caltrans. Telephone conversation with Susan Sanders, September 25, 2008.

Moreno, M. 2008. Biologist, U.S. Fish and Wildlife Service, Carlsbad. E-mail communication with Susan Sanders, California Energy Commission, September 2, 2008.

OGE2008a – OGE/S. Thome (tn46770) Application for Certification Orange Grove Energy dated 6/19/08. Submitted to California Energy Commission Dockets 6/19/08.

OGE2008c – OGE/S. Thome (tn46979) Supplement to AFC dated 7/8/08. Submitted to Dockets 7/8/08.

OGE2008d – OGE/E. Back (tn47644) Email from E. Back to CEC regarding L. Monarres/US COE no permit required from Corp for Section 404 waters. Submitted to Dockets 8/20/08.

OGE2008g– S. Thome (tn48311) Supplemental information from 9/11/08 workshop dated 10/1/08. Submitted to Dockets 10/1/08.

TRC2008j - OGE/E. Back (tn48765) Email from E. Back to M. Moreno, USFWS, regarding Red Mountain Mitigation Bank. Submitted to Dockets 10/24/08.

TRC 2008f – J. Stenger (tn47854) Data Responses 1-73 dated 8/29/08. Submitted to Dockets 8/29/08.